DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

950494

Food and Drug Administration
Center for Devices and
Radiological Health
2098 Gaither Road
Rockville, MD 20850

NOV 1 2004

WARNING LETTER

VIA FEDERAL EXPRESS

Mr. Kim Yong Chang, President
Shin Chang Medical Co., Ltd.
#165-11 Simi-Dong
Gumi-Shi, Kyungsangbuk-Do
730-340 Korea, Republic of (South)

Dear Mr. Kim Yong Chang:

During an inspection of your firm located in Gumi-Shi, Korea on June 7 through June 10, 2004, investigator Seth Mailhot from the United States Food and Drug Administration (FDA) determined that your firm manufactures sterile insulin syringes. These products are devices within the meaning of section 201(h) of the Federal Food, Drug, and Cosmetic Act (the Act) (21 U.S.C. § 321(h)).

This inspection revealed that these devices are adulterated within the meaning of section 501(h) of the Act (21 U.S.C. § 351(h)), in that the methods used in, or the facilities or controls used for, their manufacture, packing, storage, or installation are not in conformity with the Current Good Manufacturing Practice (CGMP) requirements of the Quality System (QS) regulation found at Title 21, Code of Federal Regulations (CFR), Part 820. Significant violations include, but are not limited to, the following:

1. Failure to ensure that measuring equipment is suitable for its intended purposes or capable of producing valid results, as required by 21 CFR 820.72(a). For example, the following equipment used in the sterilization process has not been recently determined to be in calibration or was unsuitable for its intended purpose:

> a) Pressure and humidity sensors and recording equipment (chart recorders) for sterilization [redacted] and [redacted] have not been calibrated, with the exception of [redacted] in Chamber [redacted], which was last calibrated on March 17, 2000. Pressure and humidity are critical parameters of the sterilization process, and are cited in your firm's sterilization procedure, titled "[redacted]", identified [redacted], dated June 1, 2000, [redacted], and normative reference, titled "Sterilization of medical devices: Validation and routine control of ethylene oxide sterilization", DIN EN 550:1994, which is listed as a normative reference in the most recent sterilization revalidation report titled "[redacted].

[redacted]", report no. [redacted], dated May 2004.

b) Thermometers used to measure incubator temperatures do not provide for continuous monitoring or recording of temperature. Incubators run continuously to incubate samples over a period of days and temperature must be monitored and recorded continuously.

2. Failure to monitor and control process parameters during production, as required 21 CFR 820.70(a)(2). For example:

a) During the sterilization process Chamber [redacted] was incapable of measuring relative humidity from early April 2004 to at least June 10, 2004. The failure of the humidity measurement system was never documented. The chamber was used during that period to sterilize product.

b) Chamber [redacted] was incapable of continuously monitoring temperature from May 8, 2004 to June 1 or 2, 2004. The failure of the temperature recording system was documented only on the Device History Record of the sterilization batch when the problem first occurred. The chamber was used during that period to sterilize product.

3. Failure to ensure that equipment used in the manufacturing process meets specified requirements, as required by 21 CFR 820.70(g). For example, either the chart recorder for sterilization Chamber [redacted] is unable to measure pressure or Chamber [redacted] is incapable of maintaining constant pressure within the chamber during the [redacted] cycle, as seen on chart recorder records contained in Device History Records and validation reports utilizing Chamber [redacted]. The problem appears to have been occurring for at least the past three months.

4. Failure to adequately validate and approve according to established procedures a process whose results cannot be fully verified by subsequent inspection and test, as required by 21 CFR 820.75(a). For example, the specifications for the sterilization process, as stated in the procedure titled "[redacted]", identified [redacted], revision [redacted], dated June 1, 2000, were not fully covered in your re-validation in the following instances:

a) The specification for sterilant gas states a range of [redacted] Ethylene Oxide. Your firm failed to demonstrate that the lower concentration of [redacted] Ethylene Oxide had been validated. Further, there was no documentation on the actual concentration of sterilant gas used in the validation study. Your firm stated that validation of

sterilant gas of [redacted] Ethylene Oxide has never been performed, and that use of sterilant gas of [redacted] Ethylene Oxide would require different operating parameters for temperature, pressure, humidity, etc.

b) The recent revalidation of Chamber [redacted], which is contained in the report titled "[redacted]", report no. [redacted], dated May 2004, shows that the sterilization process was not operating within specification. The pressure is to be maintained at [redacted] over the course of [redacted] and [redacted]. The chart recorder record for the sterilization cycle revealed the pressure ranged from [redacted] over the course of the sterilization cycle.

5. Failure to implement and record changes in methods and procedures needed to correct and prevent identified quality problems, as required by 21 CFR 820.100(a)(5). For example, the corrective and preventive action, [redacted], required that the raw materials be stored in [redacted] to prevent the contamination of dust and that raw materials stored in [redacted] should be inspected more carefully for the presence of dust. However, this requirement was not documented in your firm's raw material storage procedures.

6. Failure to verify or validate the corrective and preventive action to ensure that such action is effective and does not adversely affect the finished device, as required by 21 CFR 820.100(a)(4). For example, your firm only confirms the corrective and preventive action has been taken but does not include any verification or validation activities to ensure the action is effective and did not negatively impact the finished devices.

7. Failure to establish and maintain procedures to control the design of the device in order to ensure that specified requirements are met, as required by 21 CFR 820.30(a). For example, your firm has not implemented any approved design control procedures.

This letter is not intended to be an all-inclusive list of violations at your facility. It is your responsibility to ensure compliance with applicable laws and regulations administered by FDA. The specific violations noted in this letter and in the Inspectional Observations, Form FDA 483 (FDA 483), issued at the closeout of the inspection may be symptomatic of serious problems in your firm's manufacturing and quality assurance systems. You should investigate and determine the causes of the violations, and take prompt actions to correct the violations and to bring your products into compliance.

Given the serious nature of these violations of the Act, the medical devices manufactured by your firm imported or offered for import are subject to refusal of

admission under section 801(a) of the Act, 21 U.S.C. § 381(a), in that they appear to be adulterated. As a result, FDA may take steps to refuse these products, known as "detained without physical examination," until these violations are corrected.

In order to remove the devices from detention, you should provide a written response to this Warning Letter as described below and correct the violations described in this letter. We will notify you if your response is adequate, and we may need to re-inspect your facility to verify that the appropriate corrections have been made. In addition, U.S. federal agencies are advised of the issuance of all Warning Letters about devices so that they may take this information into account when considering the award of government contracts.

We received a response from you dated July 12, 2004, concerning our investigator's observations noted on the FDA 483. We have reviewed your response and have concluded that it is inadequate for the following reasons:

Your response for the first four violations listed above contained a brief summary of the cause of the deficiency, along with the scheduled corrective action date, but did not provide evidence for us to determine if the corrective action was adequate.

The corrective action for violation #5 of this letter was adequate in that you have corrected the storage procedure by including the requirement of [redacted] the devices, which was identified in your firm's corrective and preventive action. Furthermore, your corrective action procedures [redacted] requires that the Q.A. team leader shall ask relative teams to make corrective actions to procedures. Please remember that the changes made to methods and procedures needed to correct and prevent identified quality problems shall be documented.

The corrective action for violation # 6 of this letter is inadequate in that the Corrective and Preventive Action procedure, [redacted], does not contain requirements for validating corrective and preventive actions. The procedure [redacted] contains section [redacted] – "Verifying the result of corrective action". Section [redacted] of the CAPA procedure states the Q.A. manager shall verify if the result of the corrective action plan is satisfactory. However, the CAPA procedure does not discuss validation of the corrective actions to ensure that such action is effective and does not adversely affect the finished device.

The corrective action for violation #7 of this letter was inadequate in that your response does not include the approved design control procedures. Your response states, "In the Quality manual to obtain ISO 9002 and 13488 there was no design management required. However we will include the process by

dispatching a staff to manage it constantly." Your firm needs to establish design control procedures.

Please notify this office in writing within fifteen (15) working days from the date you receive this letter, of the specific steps you have taken to correct the noted violations, including an explanation of how you plan to prevent these violations, or similar violations, from occurring again. Include all documentation of the corrective action you have taken. If you plan to make any corrections in the future, include those plans with your response to this letter as well. If the documentation is not in English, please provide a translation to facilitate our review.

Please direct your response to Carolyn Niebauer, Chief, General Hospital Devices Branch, HFZ-333, Center for Devices and Radiological Health, 2098 Gaither, Rockville, Maryland 20850. If you have any questions about the contents of this letter contact Ms. Niebauer at (240) 276-0115 or by facsimile at (240) 276-0114.

Sincerely yours,

Timothy A. Ulatowski
Director
Office of Compliance
Center for Devices and
Radiological Health